

EXHIBIT D



Coercive control in intimate partner violence[☆]

L. Kevin Hamberger^{a,1}, Sadie E. Larsen^{b,c,*,1}, Amy Lehrner^{d,e,1}

^a Department of Family and Community Medicine, Medical College of Wisconsin, 2400 W. Villard Ave., Milwaukee, WI 53209, USA

^b Clement J. Zablocki Veteran's Affairs Medical Center, 5000 W. National Ave., Milwaukee, WI 53295, USA

^c Department of Psychiatry, Medical College of Wisconsin, 1155 N. Mayfair Rd., Milwaukee, WI 53226, USA

^d James J. Peters VA Medical Center, 130 W. Kingsbridge Rd., Bronx, NY 10468, USA

^e Icahn School of Medicine at Mount Sinai, Department of Psychiatry, 1 Gustave L. Levy Place, New York, NY 10029, USA



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ABSTRACT

The construct of coercive control has been central to many conceptualizations of intimate partner violence (IPV), yet there is widespread inconsistency in the literature regarding how this construct is defined and measured. This article provides a comprehensive literature review on coercive control in regards to conceptualizations, definitions, operationalization, and measurement; and attempts to provide a synthesis and recommendations for future research. A summary and critique of measures used to assess coercive control in IPV is provided. At least three facets of coercive control are identified: 1) intentionality or goal orientation in the abuser (versus motivation), 2) a negative perception of the controlling behavior by the victim, and 3) the ability of the abuser to obtain control through the deployment of a credible threat. Measurement challenges and opportunities posed by such a multifaceted definition are discussed.

Intimate partner violence (IPV) is a worldwide epidemic that causes negative impacts on the health and wellbeing of victims, families, and communities (Bonomi et al., 2006; Coker, Smith, Bethea, King, & McKewon, 2000; Cooper & Smith, 2011; Pico-Alfonso et al., 2006; Sheridan & Nash, 2007; Whitaker, Haileyesus, Swahn, & Saltzman, 2007). At the heart of understanding IPV to date is the construct variously referred to as power and control, domination and control, or coercive control. Scholars and advocates in the field have consistently described IPV as both an expression of—and an attempt to maintain—power and control over intimate partners (e.g., Shepard & Pence, 1999). Early formulations conceptualized power and control within a feminist, sociopolitical framework, and examined how structural societal forces created environments of oppression that facilitate violence against women, both in relational and cultural contexts (e.g., Adams, 1988; Schechter, 1982). For many years, the concept of control as it relates to violence against women has guided research, policy and practice. For example, the most commonly used model for treatment of abusive men, the so-called Duluth model (Pence & Paymar, 1993), has as its centerpiece the Power and Control Wheel. In fact, so pervasive is the notion of power and control that, with the proliferation of batterer treatment standards across the U.S., many states adopted as part of their standards the requirement to include information on power and control in approved or certified batterer treatment programming

(Austin & Dankwort, 1999).

However, the evolution of controversy over the role of gender in IPV (e.g., Hamby, 2015; Kimmel, 2002; Straus, 1999) has raised questions about the degree to which power and control should be understood as a relational enactment of larger social structures of gender inequality and oppression. Some scholars argue that because rates of self-reported IPV perpetration appear to be symmetrical (i.e. men and women report acts of IPV at similar rates), power and control issues need to be separated from gender (Felson & Outlaw, 2007). Other scholars argue, in contrast, that while men's and women's use of violence may be symmetrical, motivations for use of violence, including control, differ by gender (Dobash & Dobash, 2004).

Early research reviewed by Hamberger (2005) supports the thesis that motivations for use of IPV vary by gender. A more recent, systematic review of men's and women's use and experience of IPV in clinical samples, however, suggests there is less clarity about the relationship of gender and IPV motivations (Hamberger & Larsen, 2015). Hamberger and Larsen (2015) suggest that the lack of clarity about the relationship between control and gender highlights an important gap in the literature regarding how the construct of control in IPV is defined and studied. Although the concept of control as a key dynamic that maintains IPV has been generally accepted within the field, there is actually very little research or consensus on the concept of coercive

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* Corresponding author at: Clement J. Zablocki Veteran's Affairs Medical Center, 5000 W. National Ave., Milwaukee, WI 53295, USA.

E-mail addresses: kevinh@mcw.edu (L.K. Hamberger), selarsen@mcw.edu (S.E. Larsen), amy.lehrner@va.gov (A. Lehrner).

¹ All authors contributed equally to this manuscript.

control. Analyses of coercive control have been primarily theoretical, reflecting a sociopolitical perspective (Stark, 2006, 2007), or empirical, focusing on objective behavioral indicators or self-reported motivations (Hamberger & Lohr, 1985; Myers, 1995). Questions about gender symmetry also underscore the need to understand the context of coercive control in IPV. Without understanding of overall context of violence in relationships, including the pattern of control and violence (as opposed to a single behavior viewed in isolation), it is very difficult, if not impossible, to isolate sex differences or similarities in IPV. An example of the weakness of an a-contextual approach is drawn from an early study by Hamberger, Lohr, and Bonge (1994). A female participant identified her primary motivation for her use of IPV as “control.” She then explained that her partner had a history of violence against her and she had sustained a severe head injury as a result of an assault. She decided that she needed to use force to physically restrain and remove him from her residence during subsequent violent episodes. Without her explanation of the overall context of her use of violence, her response of “control” to the question of her purpose for using IPV would have given the appearance of “mutual violence.”

The present review paper addresses three questions related to the construct of control as it relates to IPV. First, is there a common understanding of power and control or coercive control? The first goal of the present paper will be to review the literature on how the concept of control is defined, to point out differences across laboratories, and to identify areas of common agreement. A related goal will focus on the question of whether control is primarily an internal motivational state or the function of reinforcement contingencies. The second goal of the paper is to outline and critique the state of the knowledge on *measurement* of control. The third goal is to argue for a particular conceptualization of control and suggest recommendations for future research in this important area. Throughout the literature, we note the use of terms power and control, dominance and control, coercive control and control. Though there may be some differences in the respective constructs, a unifying theme across the different terminologies is control of the actions of one human being brought about by the actions of another. As such, we will characterize these functions as coercive control throughout the article, unless we are referring directly to the terminology used by a particular author.

1. Defining control in IPV

Control in IPV has been variously conceptualized as a goal or intention, an internal motivation, a type of behavior, an outcome, and/or a perception or subjective experience. Beck, Menke, Brewster, and Figueiredo (2009) state that control is “a pattern of behaviors that can be used by one or both spouses to manipulate and control the actions of the other spouse” (p. 297). Ehrensaft, Langhinrichsen-Rohling, Heyman, O’Leary, and Lawrence (1999) define control as behaviors that “...attempt to or have the effect of directing or constraining a spouse’s actions, thoughts or emotions” (p. 21). Thus, from the perspective of Ehrensaft et al. (1999), *attempts* and *effects* are the same thing in terms of control of an intimate partner. Further, to be controlling, the behavior must be perceived as negative by the recipient, thus differentiating controlling behavior from what Ehrensaft et al. characterize as mutual or normative interspousal influence (Ehrensaft et al., 1999). Dutton and Goodman (2005) define coercive power as “...the agent’s ability to impose on the target things the target does not desire, or to remove or decrease desired things” (p. 745). Thus, Dutton and Goodman differ from Ehrensaft et al., in that coercive control is contingent on the agent’s *ability* to make the imposition. Attempts to do so that are not successful are presumably not controlling in Dutton and Goodman’s model. Dutton and Goodman (2005) further elaborate that the target believes that they can and will experience negative consequences for noncompliance with the perpetrator’s demands. In fact, to be coercive, the perpetrator’s act must signal a threat of subsequent negative consequences (Dutton & Goodman, 2005). This perception by the target of

potential negative consequences is similar to Ehrensaft et al.’s position that the recipient must perceive the partner’s behavior as negative in some manner that leads to compliance.

A number of authors identify the *establishment* and exercise of dominance by one partner over another as key to coercive control (Beck et al., 2009; Cook & Goodman, 2006; Ehrensaft et al., 1999). Dominance is a function of multiple factors, including disparities in gender roles and gender role expectations (Bair-Merritt et al., 2010; Frieze, 2005; Stark, 2007). Dominance and control in relationships characterized by IPV is typically established and maintained through violence, intimidation, and/or threats (Beck et al., 2009; Cook & Goodman, 2006; Miller & White, 2003; Stark, 2006). On the other hand, coercive control is not, in itself, denoted by violent behavior. Rather, it is an *underlying dynamic* that is established and maintained by the use of violence, as well as other means (Stark, 2007; Tanha, Beck, Figueiredo, & Raghavan, 2010). Nevertheless, violence is intertwined with coercive control. According to Cook and Goodman (2006), the violence may be delivered randomly and unpredictably, and results in a state of terror in the victim.

Coercion also involves outcomes that predictably and reliably occur as a result of some other action or condition. For example, when a key is inserted into a car ignition and turned to the start position, the engine starts. This is known as a contingent outcome. Hence, engine starting is contingent upon key insertion and turning to the on position. Regarding coercive control, an example of response contingency is that non-compliance with perpetrator demands leads to negative outcomes, such as violence or intimidation, whereas compliance may lead to avoidance of negative outcomes or rewards. For example, a woman reported that early in their marriage, her husband systematically beat her on a weekly basis while telling her to never go against his will. Several years after the physical violence ended, she approached him about buying a used car to aid in a job commute. When he told her he advised against it, she reacted emotionally with extreme fear, just as she had many years previously and abandoned her search for a car. Therefore, as the example illustrates, coercive control is established and maintained through contingent punishment or negative reinforcement (Dutton, Goodman, & Schmidt, 2006) and involves showing the target not only the willingness to deliver negative consequences, but the ability to do so (Day & Bowen, 2015; Dutton et al., 2006; Stark, 2006). Thus, coercive behavior may be purposeful, strategic, and goal directed, though certain behaviors may be coercive without the perpetrator’s conscious recognition of them as such (Day & Bowen, 2015; Dutton et al., 2006; Ehrensaft et al., 1999; Stark, 2006). An example of such lack of awareness of the precise contingencies is offered by a perpetrator attending a batterer intervention program who, while ending overt physical and psychological abuse received feedback from his partner that she still was afraid in conflict situations because he expressed a certain facial expression that consistently accompanied physical assaults in the past. He was not aware of his nonverbal coercive behaviors until he received that feedback. Generally, types of abusive behavior that facilitate and support coercive control include implicit and explicit forms of intimidation, actual physical and sexual violence, property destruction, and threats. Within any given relationship, however, the specific behaviors used to intimidate a target are unique to that given relationship (Stark, 2006, 2007). Specific behaviors used are based on the offender’s knowledge and assessment of the target’s vulnerabilities. Thus, the behaviors that support coercive control in one relationship may differ from those that support it in another relationship, posing a challenge to the development of universal survey measures.

Coercive control reduces the target’s power to make decisions, places limitations on independence, and diminishes the target’s self-image and strength (Ehrensaft et al., 1999; Robertson & Murachver, 2011). Multiple authors agree that coercive control impacts virtually all dimensions of the target’s life, including everyday actions, use of economic resources, relationships with family and friends, educational and occupational opportunities, sexuality, and general life activities (Bair-

Merritt et al., 2010; Beck et al., 2009; Davis, Swan, & Gambone, 2012; Robertson & Murachver, 2011; Stark, 2006, 2007).

Dutton and Goodman (2005) view credible threat as central to coercive control. Specifically, to be coercive, an act must signal a threat of subsequent negative consequences. To be credible, the perpetrator must be competent to deliver on a threat. Miller and White (2003) observed that increased competency of offending was directly related to increased coercive control. The target must believe that they can and will experience negative consequences for noncompliance, and that they may experience reward for compliance (Dutton & Goodman, 2005). Further, the perpetrator's demand must be linked to a credible threat of a meaningful negative consequence (Bair-Merritt et al., 2010; Day & Bowen, 2015). The concept of credible threat suggests that targets of coercive control execute cognitive appraisal processes to determine the likelihood of receiving negative consequences in any given interaction.

In order to define coercive control, it must also be differentiated from similar but separate concepts, such as psychological abuse and persuasion. Ehrensaft et al. (1999) view control as a sub-type of psychological abuse, which constitutes a broader concept of maltreatment. They point out that not all maltreatment is controlling per se. In addition, coercion is differentiated from psychological abuse in that not all psychological abuse is controlling even if it is damaging in some way (Dutton & Goodman, 2005; Ehrensaft et al., 1999). This view is similar to that of Stark (2007) who states that physical violence per se is not equated with coercive control, as noted above, as well as Johnson (2010) who has identified situational violence as related to attempts to control a specific conflict situation but not overall control of another person.

Coercive control is also differentiated from influence or persuasion (Bair-Merritt et al., 2010; Day & Bowen, 2015; Ehrensaft et al., 1999). A key difference between control and persuasion or influence is that, with control, the target is constrained as to the choices they have, and they perceive the control as negative. That is, the target of coercive control can reliably predict negative outcomes for failure to comply with the demands of the perpetrator, thus, their choices are limited (Dutton & Goodman, 2005). Influence or persuasion does not constrain, and leaves open the possibility that the target will not give in to the influence. Cook and Goodman (2006) further differentiate between conflict and coercion. Conflict may be resolved in multiple ways. Coercion functions to limit the target's options, as noted above with influence or persuasion.

In summary, although there is not yet a consensus definition of coercive control, some common threads emerge in the literature. Researchers have conceptualized three major facets of the construct of coercive control in a relationship – 1) intentionality and motivation within the perpetrator to obtain control over the target, 2) perception of the behavior as negative by the target, and 3) the ability of the perpetrator to make a credible threat. Although many scholars seem to agree that control is intentional and goal directed (Davis et al., 2012; Day & Bowen, 2015; Dutton et al., 2006; Ehrensaft et al., 1999; Frieze, 2005), there is also the potential that response contingencies may be in place regardless of the conscious intent of the perpetrator. Control may therefore be conceptualized as resulting from an internal motivational state that the perpetrator seeks to satisfy, i.e., the control motive (Felson & Outlaw, 2007), or as an outcome, i.e., as the result of the contingency between the target's actions and the perpetrator competently delivering meaningful negative consequences (Dutton & Goodman, 2005). Thus, Ehrensaft et al. (1999) discuss controlling behavior as both an intent and an effect.

As noted above, the perceptions of the target have been conceptualized as an important component of coercive control. As pointed out by Ehrensaft et al. (1999) and Dutton and Goodman (2005), to be controlling, a behavior must be perceived by the target as negative and contingent on noncompliance with some demand. Thus, perpetrator behavior must be meaningful or salient to the target in a way that

motivates compliance with a demand, or understanding that noncompliance will likely result in a personally meaningful, negative consequence. For example, a target may greatly value her job and her abusive partner may threaten to destroy all of her clothes so she cannot go into work if she does not have sex with him. She may "agree" to sex in an effort to avoid having her clothes ruined and not being able to go to work. Thus, as with perpetrators, targets of IPV also engage in cognitive processes related to appraisal and decision-making. When compliance is followed by removal of negative consequence, the compliant behavior is negatively reinforced. In such cases, target anxiety is reduced and therefore the compliant behavior is more likely to be engaged in again in similar future situations. When noncompliance is followed by a negative consequence that suppresses future non-compliant behaviors, the behavior is punished and less likely to be engaged in in future similar situations. Hence, the target learns to appreciate the relationship between noncompliance and meaningful negative outcome, and responds accordingly. In either case, the perpetrator's behavior has the effect of controlling the target's responses. These learning processes highlight the dynamic process that underlies the establishment and maintenance of coercive control over time.

Whether or not a perpetrator's behaviors will be perceived as personally salient by the target will depend on a number of factors, including the perpetrator's capacity to make a credible threat (Dutton & Goodman, 2005). First, the perpetrator must have "reward power" (Dutton & Goodman, 2005, p. 745). That is, the perpetrator must be willing and able to deliver the consequence, either negative or positive. Incompetently delivered negative consequences will not be experienced as coercive control. Lack of competence may be due to lack of skill in delivering negative consequences, lack of social power to effect salient negative consequences, or not having adequate information about what is meaningful to the target. Thus, for example, a 3-year-old child in the midst of a tantrum may physically strike its mother. Although annoyed, the mother is not fearful and does not bring her behavior in line with the demands of the child in order to reduce the probability of being hit during a tantrum in the future. Second, the perpetrator must deliver a negative consequence that is meaningful to the target. According to Stark (2006, 2007), a perpetrator has privileged access to information about the target, by virtue of the closeness of an intimate relationship, and, as such, is able to identify unique vulnerabilities that can be exploited for coercive control. For example, a woman may have confided in her new partner that she had been sexually abused as a child, but had never told anyone before out of shame. At some later time, he threatens to disclose her secret if she does not meet his demands. Likewise, Dutton and Goodman (2005) discuss the importance of the perpetrator identifying existing, or creating new, vulnerabilities to exploit with explicit or implicit threats. Although the language of "threats" and negative consequences may suggest physical violence, it is important to note that vulnerabilities and related threats are not limited to violence. For example, the systematic tearing down of the target's self confidence and trust in her own decisions, opinions and abilities commonly seen in IPV may make her vulnerable to threats of abandonment (e.g., I will leave you and no one will ever want you), judgment, humiliation, or failure if the perpetrator's desires are not met. In this way, the consequences of a pattern of emotional abuse may make a target more vulnerable to coercive control.

2. Measurement of control

Knowledge about coercive control can only advance theoretically and empirically if it can be adequately measured. Coinciding with the different ideas about how to define coercive control, there has not been a consensus to date about how to measure it, even though the idea of power and control dates back several decades. This is exemplified by the fact that studies have used a broad range of measures of coercive control (at least 22 were counted), but no one measure has been used frequently. See Table 1 for a review of published measures of coercive

Table 1
Measures of coercive control.

Measure (authors)	Definition of coercive control used	Facets of control assessed as defined by authors	Measurement: self vs. partner report, number of items, subscales if relevant	Development and psychometrics
Scale of Economic Abuse (Adams, Sullivan, Bybee, & Greeson, 2008)	“Economic abuse involves behaviors that control a woman’s ability to acquire, use and maintain economic resources, thus threatening her economic security and potential for self-sufficiency.” p. 564	“Behaviors that control a woman’s ability to acquire, use, and maintain economic resources” p. 569	28 self-report items completed by women abuse survivors Two subscales: – Economic control – Economic exploitation	Items derived from the IPV literature, knowledge and experience of researchers and advocates and survivors, extant measures of psychological abuse Psychometrics: Chronbach’s alpha, item-total correlations, principal components analysis, concurrent validity, construct validity
Intimate Partner Violence Control Scale (Bledsoe & Saf, 2011)	“Coercive controlling IPV consists of the use of physical violence along with systematic, terroristic control tactics.” p. 172	Behaviors respondents “wished” they could use to control a partner	16 self-report items completed by men. Three facets of control: – control through surveillance and threats – control over everyday routines and decision making – control over autonomous behaviors	Items derived from a review of the literature on IPV and control and the authors’ experience working with and interviewing IPV victims Psychometrics: Chronbach’s alpha, inter-item analysis, concurrent validity analysis Unclear item derivation Psychometrics: none reported
Marital power and decision-making scale (Blood & Wolfe, 1960)	The authors don’t use the term “coercive control”	Power to make an important decision within a couple via asking who makes the final decision about various scenarios e.g., what car to get. Also, “when you and your husband differ about something, do you usually give in and do it your husband’s way, or does he usually come around to your point of view?”	Eight interview questions asked of the wife	Initial item pool derived from literature review and survey of DV advocates, then reviewed with female focus groups. Pilot tested remaining items with imprisoned women IPV victims. Revised the measures based on feedback, psychometric analyses, and theory. Psychometrics: Chronbach’s alpha, construct validity, factor analysis confirming the two scales Item derivation is described in a technical report (https://www.ncbi.nlm.nih.gov/APP/Publications/abstract.aspx?ID=173547); items were developed for the purpose of this study.
Brief Coercion and Conflict Scales (Cook & Goodman, 2006)	Coercion means the use of various tactics to compel a woman to do or not do something	The degree to which conflict versus coercion defines the interpersonal context of women’s abuse experiences (does not assess specific behaviors)	Seven self-report items completed by victim Two subscales: – Conflict scale – Coercion scale	Initial item pool derived from literature review and survey of DV advocates, then reviewed with female focus groups. Pilot tested remaining items with imprisoned women IPV victims. Revised the measures based on feedback, psychometric analyses, and theory. Psychometrics: Chronbach’s alpha, construct validity, factor analysis confirming the two scales Item derivation is described in a technical report (https://www.ncbi.nlm.nih.gov/APP/Publications/abstract.aspx?ID=173547); items were developed for the purpose of this study.
Controlling Behaviors Index (Dobash, Dobash, Cavaragh, & Lewis, 1998)	“A range of other aggressive, controlling, and coercive acts” p. 388	Controlling behaviors (physical, threats, and emotional), asking “Does he ever do any of the following in a way which you know means you have to be careful?”	22 interview questions with cue cards asked of women or men (but designed to assess men’s control of women)	Psychometrics: Reports only concordance between partners’ reports of controlling behaviors Items derived to test literature-based hypotheses. Tested in a student sample.
Control Scale (Follingstad, Rutledge, McNeill-Harkins, & Polek, 1988; Follingstad, Rutledge, Polek, & McNeill-Hawkins, 1988)	“Physical force may be an extension of other controlling behaviors or may be resorted to when other forms of control do not work to keep the woman acting as he intends” p. 171	Controlling behaviors that could be engaged in by a man, and that a woman might allow. Women first checked whether the behavior had ever happened, and then how likely they would be to allow it.	47 self-report items completed by women. Narrowed down to 8 “allowed” items that are most significant, and 13 “happened” items that are most significant.	Psychometrics: Reports only concordance between partners’ reports of controlling behaviors Items derived to test literature-based hypotheses. Tested in a student sample.
Measure of Psychologically Abusive Behaviors (Follingstad, 2011)	No definition of coercive control is used; control is one subscale of an abuse measure	Assesses emotional abuse, surveillance, jealousy, isolation, and domination The control subscale assesses control of partner’s personal decisions	Three self-report item completed by victim	Items were created to mirror an earlier scale of a wide range of behaviors. The authors validated this measure with a national sample only to determine whether it indeed included egregious behavior; they do not describe data within a sample responding regarding their own experiences. Psychometrics: none presented at the 3-item (continued on next page)

Table 1 (continued)

Measure (authors)	Definition of coercive control used	Facets of control assessed as defined by authors	Measurement: self- vs. partner report, number of items, subscales if relevant	Development and psychometrics
Controlling Behaviors Scale (CBS; Graham-Kevan & Archer, 2003) and CBS-R (Graham-Kevan & Archer, 2005)	Does not formally define coercive control, but did discuss the need to differentiate control from simple high rates of violence	Behaviors that contribute to control	24 self-report items completed to assess both victimization and perpetration Subscales: – Economic abuse – Coercion and threats – Intimidation – Emotional abuse – Isolation	subscale level Items derived from Duluth Model (DAP) concepts of power and control Psychometrics: Chronbach's alpha, overall and for each subscale
Conflict Assessment Protocol (Girdner, 1990)	Does not use the term coercive control, but notes that "spouse abuse is an insidious form of power imbalance" (p. 365) and that it is assessing "dominance and acquiescence" (p. 368) in decision-making, control of decision-making, control over daily activities, and control of economic resources	Patterns of making decisions, fighting, expressing anger, and abusive behaviors. Assesses attempts to control as well as actual control over actions of the other person. Directs the assessor to look for "intent, attribution, decision making, and controlling or abusive behaviors that are considered controlling (does not assess for intention)"	Semi-structured interview questions asked of both members of a divorcing dyad (seeking mediation)	Items developed by the author based on clinical experience and discussion with battered women's advocates Psychometrics: None reported
Controlling and Abusive Tactics Questionnaire (CAT; Hamel, Jones, Dutton, & Graham-Kevan, 2015)	"Coercive or aversive acts intended to produce emotional harm or threat of harm (Murphy & Cascardi, 1999, p. 202)", including physical, sexual, or emotional abuse, as well as attempts to control a partner's actions	Emotional abuse and behaviors that are considered controlling (does not assess for intention)	Version 1: CAT 62 items: self-report or partner-report Subscales: – Threats and intimidation – Isolation and jealousy – Economic abuse – Diminishment of self-esteem – General control – Obsessive relational intrusion (e.g., stalking) – Passive-aggressiveness and withdrawal – Using children – Legal system abuse – Sexual coercion	Items derived from literature review, clinical experience, and expert consultation, with an emphasis on gender-neutral items and control items specific to female perpetrators e.g., "makes fun of partner's sexual performance". Psychometrics: Chronbach's alpha, criterion validity, predictive validity, factor analyses, convergent and discriminant correlations
Relational Entitlement and Proprietariness Scale (Hannawa, Spitzberg, Wiering, & Teranishi, 2006)	Authors cite Wilson and Daly (2001) definition of proprietariness, which implies both emotional force of one's desire for control and exclusivity and a sense of entitlement toward one's partner	Behaviors and attitudes related to control and proprietariness toward one's partner	Version 2: CAT-2 has several versions (female-specific, male-specific, and gender-neutral) that are shorter (35–37 items) falling into three subscales: – Dergation and control – Jealousy hypervigilance – Threats/control of space	Items derived from multiple steps, including literature review, author brainstorming related measures, focus groups Psychometrics: Chronbach's alpha, construct validity
Canadian Violence Against Women Survey (Johnson, 1996)	Violence and threats are seen as used in order to maintain power and control within a relationship. Likewise, emotional abuse is used to undermine self-worth and thus make the victim more susceptible to control	"Emotionally abusive behavior"	49 self-report items Four factors: – Behavioral control – Informational control – Face threat reactivity – Social control	Item development undertaken by Canada's federal Department of Health. Interviewed 12,300 women. Psychometrics: none reported

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Table 1 (continued)

Measure (authors)	Definition of coercive control used	Facets of control assessed as defined by authors	Measurement: self- vs. partner report, number of items, subscales if relevant	Development and psychometrics
Checklist of Controlling Behaviors (Lehmann, Simmons, & Pillai, 2012)	“Coercive controlling violence is a pattern of physical violence that is coupled with emotionally abusive intimidation, coercion and control” p. 914	The intensity and frequency of multiple dimensions of behaviors that are violent, abusive, controlling and/or coercive <ul style="list-style-type: none"> – Physical abuse – Sexual abuse – Male privilege – Isolation – Minimizing and denying – Blaming – Intimidation – Threats – Emotional abuse – Economic abuse 	and friends, and denying her access to the family finances 84 self-report items asked of the victim. 10 subscales:	Initial 101 initial items based on clinical experience and theory. Pilot tested with shelter residents to refine using factor analysis Psychometrics: Chronbach's alpha, item analysis
Mediator's Assessment of Safety Issues and Concerns (MASIC; Pokerman <i>et al.</i> , 2014)	No specific definition of coercive control is provided, but the authors cite Stark (2007) and Johnson (2006) in their coverage of the issue.	Behaviors used to control partner e.g., “try to control your activities in or outside the home”	14 items that can be self-report or interview, asked of people going through divorce mediation.	Items derived from previous IPV instruments that have been standardized and tested for reliability and validity. Coercive Control subscale was determined theoretically and confirmed through factor analysis. Psychometrics: intercorrelations of total scores, correlations of subscale scores, McDonald's omega measure of internal consistency.
Work/School Abuse Scale (Riger, Ahrens, & Blickenstaff, 2001)	Measures behaviors that prevent or interfere with work and school participation, but does not define or use the term coercive control	How abusive men interfere with women's participation in education and employment – both the behaviors and – in some cases – the effect (“...so that you couldn't go to work”)	12 self-report items asked of victims. Assesses restraint (preventing going to work/school) and interference (making them leave work/school) Six subscales:	Item pool derived from discussions with domestic violence advocates and job training providers and from literature review Psychometrics: Chronbach's alpha, convergent and divergent validity, and predictive validity Original 153 items derived from survivor focus groups. Expert review reduced item pool to 40. Principal components analysis resulted in final 10-item scale Psychometrics: Chronbach's alpha, known-group differences, construct and convergent validity
Women's Experiences of Battering Scale (Smith, Earp, & DeBellis, 1995)	Does not use the term coercive control, but defines “psychological vulnerability” as “women's continuous perceptions of susceptibility to physical and psychological danger, loss of power and loss of control in a relationship with a male partner.” (p. 277)	Women's perceptions of abusive experiences	10 self-report items asked of the victim – Perceived threat – Altered identity – Managing – Entrapment – Yearning	9 self-report items asked of the perpetrator e.g., “I make him/her do what I want,” or “I regulate who he/she sees.” Psychometrics: omega reliability reported
Control in Dating Relationships (Stets, 1993)	“Control of others is the behavioral side of power.” p. 675 “Control occurs only when it produces the intended effect.” p. 675	“Successful control” rather than “attempted control” (p. 675). Assesses overall patterns rather than specific behaviors e.g., “I keep her from doing things I don't approve of”	Behaviors that abuse victims endorse as having happened to them in their abusive relationship Seven facets of abuse and control are assessed:	Item derivation not specified. Psychometrics: structure and item content was developed in consultation with crisis workers and IPV advocates.
Artemis Intake Questionnaire (Strauchler <i>et al.</i> , 2004)	Control is defined operationally: “Asks if abuser controls or tries to control the partner through various means, e.g., restricted use of money, told partner where she could or could not go, locked her in the house,” etc. p. 343	64 self-report items asked of the victim as part of a clinical intake	64 self-report items asked of the victim as part of a clinical intake Seven facets of abuse and control are assessed: – Humiliation and blame – Control – Severe violence and injury – Physical violence and injury – Child abuse – Monitoring – Pet abuse	Psychometrics: none reported (except that a factor analysis revealed 7 factors)

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Table 1 (continued)

Measure (authors)	Definition of coercive control used	Facets of control assessed as defined by authors	Measurement: self- vs. partner report, number of items, subscales if relevant	Development and psychometrics
Psychological Maltreatment of Women Inventory (PMWI; Tolman, 1989)	Measures psychological (non-physical) abuse of women by their male partners in intimate relationships, but does not purport to measure coercive control	Behaviors (e.g., treated me like an inferior), attempts to change behavior (e.g., tried to keep me from seeing my family), and desires (e.g., did not want me to socialize with my female friends)	58 items asked of victim or perpetrator (also a 14-item short form). Two subscales: – Dominance-isolation – Emotional-verbal	Items derived from Conflict Tactics Scale (Straus, Hamby, Boney-McCoy, & Sugarman, 1996) and Index of Spouse Abuse (Hudson & McIntosh, 1981) as well as literature review and clinical observation. Psychometrics: factor analysis, intrapersonal reliability: Chronbach's alpha for subscales item pool derivation is unclear. The authors state that items are adopted from Canadian Violence Against Women Survey, and the items closely resemble PMWS (Tolman, 1989). Psychometrics: Chronbach's alpha, tetrachoric correlation for internal reliability
National Violence Against Women Survey (Tjaden & Thoennes, 2000)	It is unclear whether the original instrument had a definition of control. Authors who used the data have utilized their own divergent definitions of control ranging from intimate terrorism to gender-neutral control processes (Felson & Outlaw, 2007; Johnson & Leone, 2005).	Control-related items assess “non-violent control tactics used by respondent's husband” including attempts (“tries to limit your contact with family”), motives (“is jealous or possessive”), actual control (“prevents you from knowing about or having access to the family income”), and psychological abuse (“calls you names”)	7 self-report items asked of victim (wife) (Johnson & Leone, 2005)	Items were based on prior physical and nonphysical abuse measures (Partner Abuse Scale; Beck <i>et al.</i> , 2009), input from mediation agency staff and director, and an expert panel
Relationship Behavior Rating Scale (Beck <i>et al.</i> , 2009)	“Coercive control is a term used to define a pattern of behaviors that can be used by one or both spouses to manipulate and control the actions of the other spouse...The controlling spouse dictates everyday actions, the use of economic resources, relationships with friends and family, work, educational opportunities, and other activities of the other spouse.” p. 297	Various aspects of abuse in relationships, including a subscale that measures coercive control	The Coercive Control subscale consists of 10 self-report items completed by both partners going through divorce mediation	Psychometrics: Chronbach's alpha, correlation of subscale scores with total, aggregate score, and criterion validity
Controllability in Intimate Relationships Scale (Whitaker & Abel, 2014)	“We conceptualize control in IPV based on lack of autonomy in the relationship and social environment.” p. 270 “The contextual factors ...constitute forms of oppression that inhibit autonomy and facilitate control.” p. 270	Aspects of the relationship context that predispose toward being controlled	29 self-report items asked of the victim Subscales: – Lack of power – Dependence – Resource deprivation	Item pool derived from expert panel, reduced to final 29 items through confirmatory factor analysis Psychometrics: Chronbach's alpha, convergent validity, discriminant validity

control.

One of the earliest measures of control was the Marital Power and Decision Making Scale (Blood & Wolfe, 1960), yet this interview utilized unclear methodology and reported no psychometric data (similar to the Conflict Assessment Protocol, Girdner, 1990). One review broke down individual items across several common IPV scales, finding that IPV scale items most commonly tapped physical violence, with control being the second most commonly assessed construct (Strauchler *et al.*, 2004). However, control is less commonly measured on its own; rather, it is often incorporated in this way into broader IPV measures. Moreover, many studies purport to assess coercive control using measures not explicitly designed to measure it (e.g., a study of control by Johnson, 2006 that choose items from existing measures in a 1970's dataset). For instance, Hamel *et al.* (2015) indicate that the Psychological Maltreatment of Women Inventory (Tolman, 1989) is the most common measure of coercive control (and Johnson, 2006 identifies it as a potential candidate for a measure of context of control), yet it was designed to measure psychological abuse, not coercive control per se (Tolman, 1989). Thus, there is a lack of consensus in the field, and there have been calls for standardization (Johnson, 2006).

Some large-scale surveys have assessed control. Both the Canadian (H. Johnson, 1996) and later US Violence Against Women Surveys (Tjaden & Thoennes, 2000) provided invaluable information about control in relationships. Yet the provenance and psychometric validity of the survey items that purport to measure control is likewise unclear. Although these surveys have yielded useful information, the scales used to assess control are brief, and the items that comprise the scales primarily describe behavioral tactics, and are thus not likely to capture the full construct. Indeed, Hardesty *et al.* (2015) reported that measuring the number of different controlling behaviors was less reliable in identifying abused women than measuring frequency with which behaviors were experienced. This suggests that a focus on behaviors alone might be an ineffective approach to measuring and identifying coercive control. In addition, despite the lack of item provenance and psychometric foundation for use of the scales that originate in the Canadian and U.S. National Violence against Women Surveys as a measure of control, numerous studies are beginning to emerge purporting to measure control, citing the Canadian and US national surveys as the basis for item selection. For example, Felson and Outlaw (2007) and Johnson and Leone (2005) both cite Tjaden and Thoennes (2000) as the source of items used in their studies. Further, Johnson and Leone credit the origin of the control items as "adopted from the Canadian Violence Against Women Survey" (p. 329). Similarly, Frye, Manganello, Campbell, Walton-Moss, and Wilt (2006) cites H. Johnson (1996) as the source of items measuring control in their study, while Krantz and Vung (2009) cite Frye *et al.* as the source of their control measurement items. Thus, increasingly, a measurement tool of unknown psychometric validity is being cited as an appropriate tool to use for measure of control. This state of affairs is ominously close to what some scholars refer to as the "woozle effect" – or evidence by citation (Maiuro, Hagar, Lin, & Olson, 2001; Straus, 2007). To further complicate matters, while there is considerable item overlap in the control scales used in each of the studies cited above, there is also considerable item divergence. For example, Frye *et al.* use a 5-item scale, while Krantz and Vung use a 6-item scale. Johnson and Leone use a 7-item scale, whereas Outlaw and Felson use a 5-item scale. Although it is possible that the control scale originated by H. Johnson (1996) and Tjaden and Thoennes (2000) is sufficiently robust to validly measure control with numerous variations in specific items used across studies, such robustness has not yet been demonstrated in the literature and brings into question whether different studies are measuring the same construct. Adapting instruments by modifying item content, structure and numbers in nonstandard ways precludes comparisons across laboratories and may provide misleading information (Messing & Thaller, 2013).

Recent years have seen increasing attempts to systematically study the construct of coercive control. Reflecting the lack of available scales,

various measures have been recommended, including the Conflict Tactics Scale psychological aggression subscale (Straus *et al.*, 1996), the Psychological Maltreatment of Women Inventory (PMWI; Tolman, 1989), and the Women's Experiences of Battering Scale (WEB; Smith *et al.*, 1995). All of these instruments have undergone appropriate testing and validation. However, though they have sometimes been used as proxy measures of coercive control, we would argue that these are all measuring somewhat overlapping but distinct constructs. Recall, for example, that while coercive control may be a subset of emotional or psychological abuse, not all psychological abuse is thought to be coercive control. Indeed, in drawing on past measures, authors sometimes refer to scales of psychological abuse as potential measures of control (e.g., Johnson, 2006). Though such abuse may "set the stage" for control, these measures are probably not assessing control itself. Others have used a combination of measures or subscales to attempt to capture the construct. For example, Hardesty *et al.* (2015) used the dominance/isolation scale of the PMWI, the WEB to assess fear, and an IPV threat appraisal scale to ascertain the target's perception of threat.

Various authors have now directly addressed the task of measuring coercive control, producing measures with potential usefulness and validity. For instance, the Controlling Behaviors Scale (Graham-Kevan & Archer, 2003), Checklist of Controlling Behaviors (Lehmann *et al.*, 2012), Controlling and Abusive Tactics Questionnaire (Hamel *et al.*, 2015), and Intimate Partner Violence Control Scale (Bledsoe & Sar, 2011) all measure controlling tactics or behaviors, and all have received at least some psychometric validation. Stets (1993) developed a tool to measure control in dating relationships specifically. Further, some other scales have addressed related but somewhat separate constructs such as sexual coercion (Sisco & Figueredo, 2008), vulnerability to control (Whitaker & Abell, 2014), possessiveness and relationship entitlement (Hannawa *et al.*, 2006), economic abuse (Adams *et al.*, 2008), or interference with women's participation in work or school (Riger *et al.*, 2001).

Although these instruments represent an important start in conceptualizing the measurement of coercive control, they also are limited. In particular, except for the Controllability of Intimate Relationships Scale (Whitaker & Abell, 2014), which measures social contextual factors that facilitate or buffer against control, and the WEB scale (Smith *et al.*, 1995), which measures a victim's perceptions or experience of and susceptibility to abusive behaviors, all of the scales reviewed measure behavioral tactics of control only. Some indirectly assess motivation for or intentionality of these actions (e.g., Psychological Maltreatment of Women Inventory). As noted above, such an assessment approach fails to capture the overall context in which such tactics occur. Without such contextual understanding, it is difficult, if not impossible, to know if endorsement of a particular tactic is, indeed, experienced as coercive control, or something else, such as attempts to influence.

More recently, there has been an effort to develop a more comprehensive and theoretically driven model and coinciding measure of coercive control. This effort led to a theoretical model of coercive control with several facets (see Dutton & Goodman, 2005; technical report Dutton *et al.*, 2006). Some facets of this have been turned into published measures (Cook & Goodman, 2006, assessing interpersonal context of abuse via the Brief Coercion and Conflict Scales), but others have not yet. The Cook and Goodman measure assesses the victim's perception that violence was used to get her to do something she did not want to do. This is the clearest assessment of the dynamic—rather than the tactics—of coercive control in existing measures. It does not, however, assess other aspects of coercive control, such as the abuser's intent or the credibility of the threat.

Regardless of the particular measure, Hardesty *et al.* (2015) have pointed out that it is important to increase standardization in how a measure is administered and analyzed. In particular, if controlling behavior is thought of as a continuum, it is important to identify standard cutoff values to differentiate low versus high control that can be

compared across studies. Using the Psychological Maltreatment of Women Inventory, they found that categorizing high vs. low controlling relationships was much more accurate when using frequencies of controlling behaviors rather than counts of controlling behavior types. Further, they advocate for the usefulness of multiple forms of cluster analysis to derive high- versus low-control groups from which to derive cutoff scores. Deriving validated cutoff scores for scales will be important but continue to be challenging as long as the field uses multiple different measures to assess the same construct.

In sum, as researchers have continued to turn their attention to this important construct, they have started to generate useful and valid measures of control. It appears that most of them measure behaviors or tactics purported to gain control. However, other aspects of the construct of control are not addressed within individual scales, for instance, motivation or intentionality of the behaviors, perception of the behavior as negative by the target, and the ability of the perpetrator to make a credible threat. None of these aspects are assessed by existing measures of coercive control (other than—indirectly—intentionality), presenting a major obstacle to moving empirical support on this issue forward. Indeed, our conceptualization of coercive control as outlined above implies that measuring coercive control would at best involve both the perspective of the perpetrator *and* the target, measuring not only the perpetrator's behaviors but also the context within which the behavior takes place and the consequences it has, ideally with a cumulative rather than single-incident focus. Thus, these measures are likely to only measure one aspect of the construct of control. These measures are also a-contextual, and thus suffer from the same interpretive problems as other behavioral checklist measures of abuse. Given that coercive control appears to be less an isolated behavior than a context, such measures face serious challenges to validity. Overall, our results imply that researchers should be very clear about what aspect of coercive control they want to measure; a range of measures may need to be included to comprehensively measure the construct of coercive control.

3. Discussion and recommendations

Despite its widespread invocation by IPV researchers and advocates, coercive control has been inconsistently defined and measured. Perhaps similar to the construct of battering (Smith, Tessaro, & Earp, 1996) or intimate terrorism (Johnson, 2010), coercive control has been used to demarcate relationships in which an imbalance of power renders one partner subservient to the other. Such a dynamic has been offered as a counterpoint to what Johnson (1995) has termed “common couple violence,” where physical aggression by both parties does not translate into a pattern of fear, control and loss of autonomy. In trying to capture a certain kind of abusive pattern distinct from the mere presence of an act of physical violence (as assessed by act-based checklists), coercive control has remained a somewhat fuzzy concept, reminiscent of Supreme Court Justice Stewart's famous definition of obscenity – “I know it when I see it.” Indeed, in extreme cases coercive control is easily identified (as in the infamous 1987 Joel Steinberg/Hedda Nussbaum case [Sullivan, 1988]²). But fundamental to accurate measurement of any phenomenon is a clear conceptualization of the construct of interest. The current review has attempted to summarize definitions of coercive control in the literature, distinguish discrepancies and commonalities in the treatment of coercive control, identify challenges in conceptualizing and measuring coercive control, and synthesize a definition of coercive control based on the literature.

² Steinberg and Nussbaum were charged with the murder of a six-year-old girl they were raising in a widely publicized case. Hedda Nussbaum had been severely and repeatedly battered by Joel Steinberg after a long period of control and social isolation, and images of her severely injured face and body were shown to the jury and published in the press. Charges against Nussbaum were dropped on the basis that she was so impaired that she had been incapable of saving the child.

Three facets of coercive control have been identified in this review: 1) intentionality or goal orientation in the abuser, 2) a negative perception of the controlling behavior by the victim, and 3) the ability of the abuser to obtain control through the deployment of a credible threat. The latter facet has two components: the ability to make a credible threat, and the capitulation of the target to this threat. This multifaceted definition reflects some of the challenges in defining and measuring coercive control, all of which will need continued attention. Coercive control has been conceived as an internal motivational state or drive, a cognitive intention or goal, and as an outcome or effect. In their review, Hamberger and Larsen (2015) point out that conceptualizing control as an intrapsychic motivation of the abuser suggests something quite different than conceptualizing control as related to reinforcement contingencies (for example, as a behavioral response by the victim to threats). If a meaningful operationalization includes both an intention to obtain control and the achievement of that control, this construct becomes more difficult to accurately measure. Is coercive control a behavior, an intention, or an outcome? Is it a feature of the perpetrator, the victim, or the relationship? If it is an achieved state, is it static, dynamic, or a pattern that is established and maintained (and potentially contested) across time? If coercive control is not a thing but a process, what are the best ways to assess such a phenomenon? Messing and Thaller (2013) also pose such questions in the area of measuring risk of IPV recidivism. They emphasize the importance of choosing instruments based on the validation sample and the goals of assessment in a particular setting, and they argue against the use of proxy instruments or nonstandard adaptation of existing instruments. Instead, they advocate for consistency in the use of measurement instruments to facilitate comparisons between studies and laboratories.

The inclusion of intentionality in the definition of coercive control raises specific conceptual and methodological challenges. Intention may reflect calculating, cognitive processes, such as might be observed in antisocial personality, or it may reflect reactive, affective processes triggered by fear of abandonment or attachment insecurity, as might be seen in someone with borderline personality. A perpetrator may have a goal or intention of obtaining compliance but not have insight into the internal motivation for such a goal. Thus, whereas intention and motivation are often used somewhat interchangeably, it may be important to distinguish these when developing an assessment of coercive control. Why one wants to control another is a separate question from what one does to obtain that control. Self-report measures that ask about internal motivational state present clear methodological limitations. We suggest that the perpetrator's intrapsychic motivation is a related but separate question from that of whether coercive control is present in a relationship and should be assessed separately. There are challenges in assessing the presence of intentional efforts to control one's partner. Does assessment of coercive control require assessment of both parties? The literature on concordance in IPV research is not encouraging, and such a requirement would significantly limit the feasibility of including coercive control in many studies (e.g., with women in shelters, courts, or emergency rooms). It is also clear that influences such as social desirability and lack of insight pose challenges to accurate assessment of perpetrators. Intentionality may potentially be identified by an interviewer or reported by one party based on explicit threats (e.g., “if you do X, I will do Y”).

Although assessment of intention poses challenges, focusing only on the aversiveness of the controlling behavior and the abuser's ability to make a credible threat raises the challenge of subjectivity in the target's perception, a critique that has been made of other measures of victims' experiences of abuse, for example of the Women's Experiences of Battering Scale (Smith *et al.*, 1995). How should the “ability to make a credible threat” be operationalized and measured? Individual differences in perceptions of another's behavior pose challenges to valid and reliable assessment. A history of following through on a threat, such as a history of violence, may contribute to the credibility of a threat, but may also not be necessary. The emphasis on threat in the proposed

definition of coercive control also must not overemphasize physical threats over other forms of coercive influence. For example, a man who disparages his partner for looking “like a whore” when she is getting ready to leave the house may shame and humiliate his partner into changing her clothes, thus obtaining the desired outcome, but the threat, if any, is an implicit one of social judgment and loss of respect rather than violence. Although this kind of behavior is designed to control the target’s behavior, perhaps it is better characterized as a different form of abuse, such as emotional abuse, than as a form of coercive control, as the behavior is more shaming than explicitly coercive. Further discussion about the contours and boundaries of this construct is warranted.

Despite these challenges, the definition offered represents an opportunity for consensus and consistency, and an improvement over efforts that assess only one facet of coercive control. For example, simply asking about motivational state underlying an identified behavior (e.g., listing “control” on a checklist) fails to account for whether the action 1) represented a credible threat and 2) led to changed behavior. One can imagine a scenario where an abuser made a credible threat (“if you go out with your friends, I will go out and cheat on you”) but the target nevertheless refused to comply. An assessment of attempts to control a partner would be positively endorsed, but not necessarily reflect the achievement of coercive control. Alternatively, a scenario as described by Miller and White (2003) in which a girl lashes out at a boyfriend who is cheating on her would likewise lead to a positive endorsement by that girl of attempting (but failing) to “control” her partner. The emphasis on coercion and the achievement of control over the target’s behavior will reduce the risk of false positives that plague current assessments of IPV (Hamby, 2016; Lehrner & Allen, 2014) and help bound the construct of interest. Non-violent forms of coercion, exquisitely attuned to an individual target’s vulnerabilities, are also an important aspect of coercive control. The emphasis here is on obtaining a desired outcome rather than on the presence or absence of a particular behavior per se.

The accurate assessment of coercive control should include an evaluation of threatened consequences of failure to comply with demands (i.e., coercion), and the achievement of the demanded behaviors (i.e., control). As a characteristic of an abusive relationship, it is also important to assess not only the presence but also the chronicity and pervasiveness of coercive control in an abusive relationship. This may require a structured interview that allows for assessment of a dynamic process of obtaining control, much as a clinical interview with follow up questions is needed for mental health diagnosis. Clinical interviews with both partners would give the most nuanced assessment, but may not always be feasible depending on the setting for the assessment. Assessment of victimization versus perpetration will also require sensitivity to the above stated challenges, and include consideration of self-report bias and social desirability (as with any assessment of IPV). Self-report measures have the virtue of brevity and ease of administration, but will always be limited by methodological constraints. One goal of this review is to spark discussion among researchers, clinicians and advocates in order to promote conceptual clarity about this construct and its measurement. As shown by Hardesty et al. (2015), accurate assessment of this construct may not only inform our understanding of predictors and correlates of IPV, but may also be very relevant for policy and legal decisions (e.g., child custody and visitation, orders of protection).

Suggestions for further research include the use of qualitative data to clarify the construct, and the development and testing of both self-report and semi-structured interview measures that address the many facets of coercive control identified by this review (i.e., intentionality or goal orientation in the abuser, negative perception by the victim, ability of the abuser to obtain control). It may be that multiple instruments that assess different aspects of coercive control would help provide a more accurate picture. Consistent with calls to expand assessment of IPV to include more contextual data, assessment of coercive control

requires development of measures that will assess the context in which potentially coercive behaviors take place, and ideally that take a relationship history perspective. Measuring different aspects of control in a longitudinal manner would allow us, for instance, to examine whether intention to control might predict later achieved control within a relationship.

Coercive control has been a construct at the intersection of individual and sociological level analyses of IPV. Cultural scripts about gender roles (e.g., “controlling your woman”), sociostructural constraints on women’s access to resources, and individual level factors such as attachment style, personality, and psychopathology all likely contribute to conditions that facilitate coercive control. Ultimately, defining and assessing coercive control is a necessary but insufficient step in explaining it. To identify the phenomenon is a difficult task in itself, and it is important not to overburden the description with the expectation that it will also fully contain its own explanation. Once we can accurately assess what it is, then we can more clearly ask why it is. Ultimately, such an understanding will further efforts to prevent IPV and to intervene to promote justice and healing.

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